<u>In the Claims</u>

This listing of claims will replace all prior versions and listings of claims in the application:

1   1.   (Currently Amended) A method for distributed device identifier
2   number assignment and device counting in a serially connected chain
3   of devices, comprising:
4   initializing a first and a second memory locations both to a
5   value that is equal to a maximum allowed number of devices in the
6   serially connected chain;
7   receiving a first sequence of received pulses;
8   determining a unique device identifier based upon the first
9   sequence received of pulses <u>by</u>
10   <u>counting a number of pulses in the first sequence of</u>
11   <u>received pulses,</u> and
12   <u>subtracting the number of pulses from the value stored in</u>
13   <u>the first memory location</u>;
14   transmitting a first sequence of transmitted pulses;
15   receiving a second sequence of received pulses;
16   transmitting a second sequence of transmitted pulses; and
17   determining a total device count based upon the first and
18   second sequences of received pulses.

2 to 4.   (Canceled)

1   5.   (Original) The method of claim 4, wherein the unique device
2   identifier is stored back to the first memory location.

1   6.   (Currently Amended) ~~The~~ <u>A</u> method ~~of claim 1, wherein~~ <u>for</u>
2   <u>distributed</u> device <u>identifier</u> number assignment <u>and</u> device <u>counting</u>
3   <u>in a serially connected chain of devices,</u> comprising ~~the~~
4   ~~determining a total device count comprises~~:

5   initializing _a_ _first_ _and_ _a_ _second_ _memory_ _locations_ _both_ _to_ _a_

6   _value_ _that_ _is_ _equal_ _to_ _a_ _maximum_ _allowed_ _number_ _of_ _devices_ _in_ _the_

7   _serially_ _connected_ _chain;_

8   _receiving_ _a_ _first_ _sequence_ _of_ _received_ _pulses;_

9   _determining_ _a_ _unique_ _device_ _identifier_ _based_ _upon_ _the_ _first_

10 _sequence_ _received_ _of_ _pulses;_

11   _transmitting_ _a_ _first_ _sequence_ _of_ _transmitted_ _pulses;_

12   _receiving_ _a_ _second_ _sequence_ _of_ _received_ _pulses;_

13   _transmitting_ _a_ _second_ _sequence_ _of_ _transmitted_ _pulses;_ _and_

14   _determining_ _a_ _total_ _device_ _count_ _based_ _upon_ _the_ _first_ _and_

15 _second_ _sequences_ _of_ _received_ _pulses_ _by_

16   counting the number of pulses in the second sequence of

17   received pulses;

18   subtracting the number of pulses from the value stored in

19   the second memory location to obtain a difference; and

20   adding the value stored in the first memory location and

21   the difference.

1   7.   (Original)   The   method   of   claim   6,   further   comprising

2   incrementing the result of adding the value stored in the first

3   memory location and the difference by one (1.0).

1   8.   (Previously Presented) A method for distributed device

2   identifier number assignment and device counting in a serially

3   connected chain of devices, comprising:

4   receiving a first sequence of received pulses;

5   determining a unique device identifier based upon the first

6   sequence received of pulses;

7   transmitting a first sequence of transmitted pulses, the first

8   sequence of transmitted pulses being a sequence of pulses with one

9   pulse less than the number of pulses in the first sequence of

10 received pulses;

11   receiving a second sequence of received pulses;

12   transmitting a second sequence of transmitted pulses; and

13   determining a total device count based upon the first and
14 second sequences of received pulses.

1   9.   (Previously Presented) A method for distributed device
2   identifier number assignment and device counting in a serially
3   connected chain of devices, comprising:

4   receiving a first sequence of received pulses;

5   determining a unique device identifier based upon the first
6   sequence received of pulses;

7   transmitting a first sequence of transmitted pulses;

8   receiving a second sequence of received pulses;

9   transmitting a second sequence of transmitted pulses, the
10 second sequence of transmitted pulses being a sequence of pulses
11 with one pulse less than the number of pulses in the second
12 sequence of received pulses; and

13   determining a total device count based upon the first and
14 second sequences of received pulses.

10 and 11.   (Canceled)

1   12. (Previously Presented) A method for distributed device
2   identifier number assignment and device counting in a serially
3   connected chain of devices, comprising:

4   receiving a first sequence of received pulses;

5   determining a unique device identifier based upon the first
6   sequence received of pulses;

7   transmitting a first sequence of transmitted pulses;

8   receiving a second sequence of received pulses;

9   transmitting a second sequence of transmitted pulses;

10   determining a total device count based upon the first and
11 second sequences of received pulses; and
12   the steps of receiving first received sequence and
13 transmitting second transmitted sequence are received and
14 transmitted over the same input/output connection.

13 to 22. (Canceled)

1   23. (Previously Presented) A system comprising:
2   a processor, coupled to a sequence of least one codec, adapted
3   to processing digital data;
4   a controller, coupled to the sequence of at least one codec,
5   adapted to controlling communications between the processor and the
6   sequence of at least one codec;
7   the sequence of at least one codec, each codec comprising:
8   a port coupled to the processor and the controller; and
9   a semiconductor device for distributed device identifier
10 number assignment and device counting coupled to the port, the
11 semiconductor device comprising:
12   a counter, coupled to an input/output node, the
13 counter for counting a number of pulses in a sequence of pulses
14 received at the input/output node;
15   a first storage location to store a first count
16 result; and
17   a pulse generator, for generating a specified length
18 sequence of pulses, the specified length being one less than the
19 number of pulses in the sequence of pulses received at the
20 input/output node.

24. (Canceled)

1   25. (Previously Presented) A system comprising:

2   a processor, coupled to a sequence of least one codec, adapted

3 to processing digital data;

4   a controller, coupled to the sequence of at least one codec,

5 adapted to controlling communications between the processor and the

6 sequence of at least one codec;

7   the sequence of at least one codec, each codec comprising:

8   a port coupled to the processor and the controller; and

9   a semiconductor device for distributed device identifier

10 number assignment and device counting coupled to the port; and

11   wherein a FSD signal line of a final codec in the sequence of

12 at least one codec is connected to an external pulse generator.

1 26. (Original) The system of claim 23, wherein the semiconductor

2 device operates each time the system is reset.

1 27. (Original) The system of claim 23, wherein the semiconductor

2 device operates each time the system is powered-up.

28 to 47. (Canceled)

1 48. (Previously Presented) The system of claim 25, wherein the

2 semiconductor device operates each time the system is reset.

1 49. (Previously Presented) The system of claim 25, wherein the

2 semiconductor device operates each time the system is powered-up.